

## **VI. Transit**

There are three general public transit operations in the study corridor: BART, AC Transit, and the Hill Hopper Shuttle.

### **BART**

Three BART stations are located along the study corridor. The Hayward BART station is located close to downtown Hayward along the Richmond-Fremont and San Francisco-Fremont lines. The South Hayward BART station is located near Tennyson Road at the southern end of the study area. The Castro Valley BART station is located some distance from the corridor, but it is the closest direct access to the Dublin-Pleasanton line.

Trains along the two Fremont lines heading to or from San Francisco and beyond operate on 15-minute headways during the week and 20-minute headways on Saturdays. People wanting to reach San Francisco on Sundays must transfer between the Bay Fair and Lake Merritt stations. Trains along the same line bound for Richmond operate on 15-minute headways during the week and 20-minute headways on Saturdays and Sundays.

The access to the Castro Valley BART station (on the Dublin-Pleasanton line) is important because trains on this line are the only ones that travel directly to the San Francisco Airport without requiring a transfer. These trains run on 15-minute headways during the week and 20-minute headways on weekends.

### **AC Transit**

This discussion of AC Transit services is based upon the transit service changes to be implemented December 21, 2003.

Route 80 crosses the study corridor at B and C Streets. This bus travels between the San Leandro and Hayward BART stations via the Castro Valley BART station. The bus operates on 30-minute headways seven days a week.

Route 84 has the same termini as Route 80, but takes a less direct route, serving the Bay Fair Shopping Center between the San Leandro and Castro Valley BART stations. It also travels along the corridor, including the portions of Foothill Blvd. between Grove and Hazel/City Center and between City Center and C Street. This bus operates on 30-minute headways during the week and 60-minute headways on weekends.

Route 91 (new line) operates between the Hayward BART station and the Castro Valley BART station along A and B Streets. Service is operated with 30-minute headways.

Route 92 connects Chabot College in Hayward to California State University at Hayward. This is one of the routes that BART riders arriving at the Hayward BART station could use to reach the

college campus. It operates on 15-minute headways during the week and 60-minute headways on the weekends.

Route 94 provides a weekday only link between the Hayward BART station and the hill neighborhoods, including Hayward High School, north of the CSUH campus. It operates on 45-minute headways.

Route 95 connects the Kelly Hill area (approximately where D Street terminates) to the Hayward BART station and crosses the study corridor at B and C Streets. It operates on 30-minute headways all day.

Route 99/301 runs along all of Mission Blvd. in the study area, as it provides bus service between the Hayward and Union City BART stations. It operates on 30-minute headways during peak periods seven days a week, 60-minute headways during non-peak periods, and extends to the Fremont BART station during late night and early morning hours as Route 301.

Transit routes are not currently present on the following segments of Foothill Boulevard:

- Mattox to Grove
- Hazel/ City Center to City Center (However, this segment is still within walking distance of Route 84, which serves the residential areas along City Center Drive.
- C Street to Jackson/ Mission

### **Hill Hopper Shuttle**

This service is operated by CSUH, and supplements AC Transit's Route 92 between the Hayward BART Station and the campus. It operates on 25-30 minute headways during weekday peak periods. There used to be a similar service from the Castro Valley BART station, but that service has been discontinued.

In addition to riding the shuttle, students can find schedules and buy transit passes on campus in the Commute Information Center. The University also offers to assist students and staff find carpool partners.

### **Impacts of No-Project on Transit**

As noted earlier in the traffic forecast section, existing traffic counts and roadway geometry (including traffic signal characteristics) were used to create a simulation of existing conditions using the VISSIM program. The primary purpose of using the microsimulation tool for the existing conditions was to calibrate the model to prepare to analyze the future conditions. By properly calibrating the VISSIM model, it is possible to make reasonable estimates of future operating conditions when characteristics such as vehicular volumes or the number of lanes change. As previously noted, the VISSIM model was then used to predict travel times in the corridor, which can also be used to evaluate transit travel times.

Although it is not possible to specifically identify travel time improvements to bus service as a result of the project, it can be assumed that similar benefits would accrue to transit users as they

would to drivers. Consequently, the travel time improvements for the corridor as shown in Exhibit 1 resulting from the project are representative of potential savings in transit travel times.

*Exhibit 1. Impacts Corridor Travel Times (mins.)*

	2025 No-Project Compared to Existing	2025 With Project Compared to No-Project
AM Peak		
Northbound	+20.3	-14
Southbound	+13.9	- 9.6
PM Peak		
Northbound	+9.7	-9.7
Southbound	+17.9	-16.7

This improved travel time over the no-project scenario will significantly impact the number of buses that AC Transit must operate in the future in order to maintain their current objective of 30-minute peak period headways on this route and future plans for 20-minute headways.

The other AC Transit Routes that cross the corridor or use shorter extents of the corridor would also experience improvements in travel times over the no-project scenario, though they may be smaller increases than shown above for AC Transit Route 99/301.

BART service, since it is on a separate facility would be unaffected by increased peak hour congestion in the corridor, although the increased congestion could be expected to reduce the auto accessibility of the BART stations in Hayward.

Higher congestion in the corridor could encourage more transit ridership, but the predicted shift would not be large enough to significantly reduce the congestion, since transit ridership is largely impacted by factors other than congestion, including frequency and reliability of service, land use patterns, and density of development. These are discussed in more detail below.

### **Impacts of Project on Transit**

As noted above, the proposed project would result in significantly improved travel times over the no-project scenario, which would impact AC Transit Route 99/301, thus significantly reducing the number of buses that AC Transit would have to acquire to maintain existing peak hour service headways in the corridor if no improvements were made in the corridor.

The AC Transit routes that cross or use shorter portions of the corridor would experience less significant benefits from the proposed project.

The project design has not been sufficiently refined to identify what the impacts of the project might be on specific bus stop locations in the corridor or pedestrian access to the bus stops. The project intent is generally to preserve existing bus stop locations in the corridor. The generally wider streets in some parts of the corridor mean that some pedestrians will generally require more time to cross the streets to reach the bus stops. The pedestrian access section of this report identifies potential improvements to address improved access.

In locations where the sidewalks are proposed to be narrowed, some right-of-way or easements will need to be acquired in order to accommodate bus shelters that meet ADA requirements.

BART service would generally be unaffected by the proposed project, since BART operates on a separate right of way. Accessibility via automobile to the Hayward BART stations would generally be improved with the proposed project. Bus accessibility to the stations would be significantly improved with the proposed project (compared to no-project).

## **Potential for Transit Improvements In the Corridor**

### **Introduction**

AC Transit recently prepared and adopted a Transit Service Deployment Plan for Central Alameda County, which includes Hayward, San Leandro, San Lorenzo and Castro Valley. Some of the proposed improvements are relevant to the corridor.

### **Improved Headways**

The most significant proposed improvement is to increase the headways on the Route 99/301. Currently, this bus operates at 30-minute headways. Within the next few years this route may go to 20-minute headways, with 15-minute headways being the ultimate goal. However, lack of funds has impeded the implementation of most of the transit improvements, including the increase in headways in the corridor. AC Transit staff has indicated that 15-minute headways are not in the foreseeable future.

### **Rapid Bus Service**

AC Transit has also evaluated other potential transit improvements within the corridor. The first such improvement would be the possibility of implementing rapid bus service in at least a portion of this corridor, similar to the service currently being provided in the San Pablo Corridor. AC Transit recently redefined the concept of rapid bus to eliminate the confusion with the more extensive bus rapid transit (BRT) usually associated with separate transit guideways. Rapid bus includes features such as frequent headways, location of far side bus stops, stops placed 1/2 to 2/3 miles apart, traffic signal coordination, transit signal priority and bus arrival information. The capital costs of implementing the service are generally low, about \$1 million per mile.

Several factors are considered in the planning process of this kind of service. One of these factors is density of development. The AC Transit density standards include Hayward in the “low density” (5-10,000 persons per square mile) category. Even within this category, it is noted that bus frequency on the arterials should be 15 minutes. As noted above, AC Transit staff has indicated that 15-minute frequency is not imminent. In order for rapid bus to be adequately supported, the density should be 20,000 or more persons per square mile. It is doubtful that even if some high-density housing were to be built along this corridor, that the kind of density needed

to support rapid bus could be reached. Even if densities along Mission Boulevard were increased (in accordance with “smart growth”), this would not take into account the traffic that already exists. While Hayward can control its own patterns of land use, it has no control over land use decisions in other jurisdictions. Moreover, the traffic model already assumes “smart growth” consistent with the City’s general plan; thus this scenario has largely been assumed and considered in the traffic analysis.

Another factor to consider is ridership. AC Transit analyzed the East 14<sup>th</sup>-Mission corridor from Bayfair to Hayward BART stations as locations for potential implementation of rapid bus service. The analysis showed 300,000 existing riders annually with a potential of 900,000 riders annually. By comparison, the San Pablo Corridor shows an annual ridership of 4.5 million, with a potential annual ridership of over 6 million passengers. The AC Transit analysis noted that of the potential corridors for implementation of rapid bus, the East 14<sup>th</sup>-Mission corridor is now listed as a third level priority. Thus far, AC Transit has not considered rapid bus south of the Hayward BART station.

One key component of rapid bus is transit priority. It should be noted that transit priority is not transit pre-emption similar to emergency vehicle preemption that already exists along most of the corridor. Transit priority is set so if a bus is approaching an intersection at either the end of a green cycle or beginning of the next green cycle, that cycle is adjusted so the bus either makes it through the tail end of one green cycle or does not have to stop or wait for the next cycle. The maximum adjustment for existing corridors like San Pablo is only ten seconds (early or extended green) and is not put into effect more than once every ten minutes for buses going in the same direction.

An ongoing concern of City staff has been the effect of transit priority on side street cross traffic, which in several locations in the City, is highly significant. Several studies have been done to analyze the impact of transit priority on side street traffic. A recent study (ITE Journal, November 2003) concluded that as the volume to capacity ratio of the side street approaches 1.0, the impact of transit priority could become more significant. There are several cross streets (i.e., A Street, Carlos Bee Boulevard and Harder Road) in the corridor where this could be the case. Where there is not significant cross street traffic, transit priority could be implemented with minimal disruption to the side streets.

It was noted earlier that the capital cost of implementing rapid bus within the corridor could be about \$1 million per mile. Such costs could be absorbed into the overall projects costs for the corridor improvement project, since a major reworking of the traffic signals in the corridor will need to be done in any case. However, source of added funds for the operating costs for a rapid bus component are not known. It may take a partnership between AC Transit, the City, Caltrans and the University to develop a plan to support the ongoing operating costs.

## **California State Hayward Transportation Improvements**

There is the potential for improving transit service to the University. As noted above, the University is served by the Hill Hopper transit service and AC Transit Route 92, which uses Second Street and Campus Drive to access the University. One of the concerns expressed by

users of these services is that the bus to campus is not direct and that it is not timed to class schedules. In addition, AC Transit has noted that it does not have buses with the capability of using Carlos Bee Boulevard, as it is too steep. However, such technology does exist.

Some of the potential improvements available in the short term include working with BART and AC Transit to better time the buses to meet University Schedules, including evening classes, working with City Car Share or another provider to implement car-sharing, implementation of a class pass, similar to that used by University of California, Berkeley (through a self-imposed student activity fee), and dynamic ridesharing. Longer-term improvements could include buses that have the capability of using Carlos Bee Boulevard (and subsequent implementation of a rapid bus from Hayward BART to the Campus) and building more housing on the campus site to encourage more bicycling and walking.

## VII. Bicycle and Pedestrian Travel

This chapter covers both pedestrian and bicycle issues related to the Route 238 Corridor Improvement Project. First the existing conditions for bicyclists and pedestrians are presented, and then separate subsections deal with potential bicyclist and pedestrian improvements in the corridor.

### The Setting for Bicyclists and Pedestrians

Foothill Boulevard and Mission Boulevard are four- to six-lane arterials with heavy traffic and high speeds (ranging from 25 to 45 mph). Bicycle and pedestrian activity is most intense in the vicinity of the schools and in the downtown area. The adjacent land uses consist mainly of commercial uses. Key destinations for bicyclists and pedestrians include:

- BART stations/transit centers
- Castro Valley BART Station (Dublin / Pleasanton line)
- Hayward BART Station (Fremont line)
- South Hayward BART Station (Fremont line)

#### Schools

- California State University Hayward (east of study area between Carlos Bee Boulevard and Harder Road)
- Moreau Catholic High School on Mission Boulevard (Mission Boulevard at Jefferson Street)
- Tennyson High School (Whitman Street north of Tennyson Road)

#### Shopping/Employment

- Downtown Hayward (near Hayward BART station)
- Foothill Boulevard (i.e., Mervyn's headquarters, Safeway, Washington Mutual, downtown shopping area)
- Mission Boulevard (commercial)

#### Parks

- Bret Harte Park and Field (Foothill-Mission-Jackson junction)
- Carlos Bee Park (Grove Way)
- Eden Greenway (west of Whitman Street near Berry Avenue)
- Green Belt Hiking and Riding Trails (east of study area starting at Hayward Memorial Park)
- Hayward Memorial Park and Hayward Plunge (near Pinedale Court)

#### Miscellaneous

- Hayward Swim Center (East Avenue)
- Holy Sepulchre Cemetery (Mission Boulevard between Harder Road and Sorenson Road)
- Tennyson Swim Center (Whitman Street)
- YMCA (Palisade Street)

There are sidewalks on both sides on most of the length of Foothill Boulevard and to a lesser extent on Mission Boulevard, but no bike lanes. The analysts who developed the City's Bicycle Master Plan concluded that these streets were not appropriate for encouraging bicycle travel, due to the high traffic volumes. The master plan identified parallel routes that could be used to provide safe routes for bicycle travel, in lieu of Mission and Foothill Boulevards.

## **Bicycle Access**

This section summarizes the portions of the City of Hayward's 1997 Bicycle Master Plan that are relevant to the Route 238 corridor and discusses the status of its implementation, identifying which bicycle routes have been completed. The analysis then focuses on two alternatives for improving the safety and convenience of bicycle travel in the Foothill/Mission Corridor. One alternative considers improvements to streets parallel to the corridor, in accordance with the City Bicycle Master Plan. The other alternative reviews potential improvements directly on Mission and Foothill Boulevards.

### **Status of the City Bicycle Master Plan**

The major goal of the City of Hayward's 1997 Bicycle Master Plan is to "...provide the opportunity for safe, convenient and pleasant bicycle travel throughout all areas of Hayward." The routes in the City's Bicycle Master Plan have been developed consistent with this goal. It should be noted that the lack of designation of any particular street as a bicycle lane, facility or path does not preclude its use by bicyclists.

Exhibit 2 illustrates the bike routes contained in the City's Bicycle Master Plan. The definitions of the various bikeways are as follows:

**Class I – Bike Path:** A bikeway that is separated from motor vehicles. Bike paths are usually 8 to 10 feet wide, wider than standard sidewalks, so as to accommodate the multiple uses such as in-line skaters, scooters, runners, skateboarders, bicyclists, and pedestrians. Bike paths may have one or more of the following amenities: call boxes, benches, trash/recycling receptacles, pedestrian/bicyclist-scaled lighting, destination signage, path-of-travel markings for the visually impaired, landscaping, and an on-going maintenance program.

**Class II – Bike Lane:** A bike lane is a designated travel lane reserved for bicyclists. It is five feet wide if curbside parking is present, but can be as narrow as four feet if no curbside parking is present. Destination signage and pavement markings with directional arrows may be included.

**Class III – Bike Route:** A bike route is a city street with signage identifying it as a recommended bike route. Pavement markings in the driving lanes may be included to remind motorists to expect bicyclists on the route. Destination signage may also be included.



*Exhibit 2. Modified City of Hayward Bicycle Master Plan*

[Insert Here Updated BICYCLE NETWORK PLAN 11-26-03.pdf]

The status of the bicycle routes along the various specific segments of the corridor is as follows:

Foothill Boulevard (Mattox to “A”)

- A bicycle route (Class III) is present on Western Avenue north of A Street to the city limits.
- A bicycle path (Class I) is proposed and is presently being developed jointly with the County from City Center Drive to Grove Way along San Lorenzo Creek.
- A bicycle route (Class III) exists on A Street from Montgomery Avenue east to the city limits.
- A bicycle route (Class III) exists on Second Street from City Center Drive to Campus Drive.

Foothill Boulevard (“A” to Jackson)

- A bicycle route (Class III) runs along Grand Street and Meek Avenue from A Street to Jackson Street.
- A bicycle lane (Class II) runs along D Street from Grand Street to Second Street.

Mission Boulevard (Jackson to Sycamore)

- A bicycle route exists on Silvia Street between Grand Street and Sycamore Avenue.
- A bicycle route is present on Sycamore Avenue between Silvia Street and Whitman Avenue.

Mission Boulevard (Sycamore to Harder)

- A bicycle route is present on Whitman Avenue from Sycamore Street to Harder Road.
- A bicycle lane provides east-west travel on Harder Road.
- The City is in the process of completing the bicycle network on Soto Road.

Mission Boulevard (Harder to Industrial Parkway West)

- A bicycle route is present on Huntwood Avenue from Harder Road to Industrial Parkway.
- A bicycle lane is present from the South Hayward BART station on Dixon to Industrial Parkway.

Orchard Avenue/Carlos Bee Boulevard Bike Route

- The Orchard Avenue/Carlos Bee Boulevard bike route exists between Soto Road and California State University, Hayward.

Hayward Fault Trail

- The Hayward Fault bicycle path is proposed from the intersection of Foothill Boulevard and E Street to Harder Road. Further study is needed to determine its feasibility, as noted in the City’s Bicycle Master Plan.

### Industrial Parkway West Bike Path

- According to the City's Bicycle Master Plan and the Alameda Countywide Bicycle Plan, a bike path is proposed along Industrial Parkway West. The bike path already exists to the west of the BART tracks.

### California State University Hayward Access

Bicyclists access the California State University Hayward on a regular basis along three existing bike routes.

- Second Street Corridor Bike Route: A bike route along Second Street and Campus Drive to the University is complete and provides one route to the University.
- Carlos Bee Boulevard Bike and Pedestrian Needs: A bike route along Carlos Bee Boulevard is present. Bike route signs currently exist although Carlos Bee Boulevard is a very steep climb.
- Harder Road Bike Lane: Harder Road currently includes bike lanes.

### Northern Access to the City of Hayward

The County has an adopted bicycle plan (1999), which relates to the Corridor Improvement Program as follows:

- A bike lane is present on Redwood Road/A Street from Castro Valley BART to the Hayward city limits, where it ties in with the City bike route. Note that since A Street in Hayward is narrower than in the County, insufficient room exists to continue the bike lane.
- A bicycle route is signed on Grove Way west of Redwood Road.
- A bicycle route is proposed for Castro Valley Boulevard/Mattox Road.
- A bicycle lane is suggested under long-term recommendations for Mission Boulevard from the Mission-Foothill-Jackson intersection to Bayfair Mall. As mentioned above, the City's Bicycle Master Plan concluded that encouraging bicycle travel on alternate routes was safer because of the high traffic volumes on Mission Boulevard.

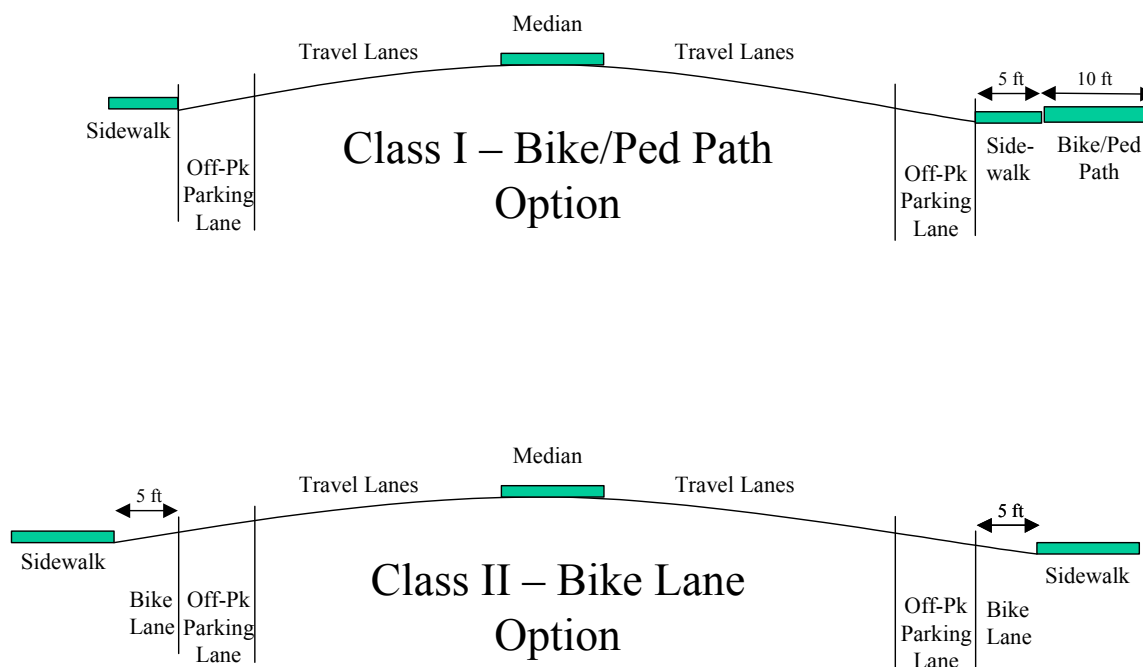
Alameda County, in its updated 1999 Plan, does not propose any bicycle facilities on Foothill Boulevard or Mission Boulevard, but does suggest a bike lane on Mission Boulevard between the Mission-Foothill-Jackson intersection and Bayfair Mall if major redevelopment or other changes in traffic occur. The Alameda Countywide Bicycle Master Plan prepared by the Congestion Management Agency includes bicycle facilities on all of Mission Boulevard, although this is inconsistent with the City's Bicycle Master Plan within the Hayward city limits.

### **Potential Bicycle Improvements on Mission and Foothill**

This section identifies options for facilitating bicycle travel on Mission and Foothill Boulevards within the boundaries of the project (Industrial Parkway to Mattox). It should be noted that all of these options are affected by both the use of parking lanes for peak hour capacity need and the desire to not require additional right of way in Segments A and D.

Option I: Install Class I bike/pedestrian path on Mission and Foothill Boulevards. This option (shown in Exhibit 3) would install a two-way 8 to 10-foot wide bike path on one side of the street on both Mission and Foothill Boulevards. The path would be 8 feet wide except in the downtown and other areas where pedestrian volumes are expected to be higher. An additional 5-foot, pedestrian-only sidewalk would be provided along those sections of Mission and Foothill where curbside parking will be allowed, to allow car passengers and bus passengers to exit their vehicles without risking immediate collision with bicyclists in the bike path. Extra sidewalk space would be required for bus shelters at bus stops. Store patrons and truckers making deliveries would have to cross the bike/pedestrian path to access businesses. In segments A and D of the corridor, where the proposed project was intended to be built within the existing right of way, this option would require acquisition of right of way along the entire corridor.

Option II: Install Class II bike lanes on Mission and Foothill Boulevards. This option (also shown in Exhibit 3) would install two 5-foot wide bike lanes (one in each direction) the full lengths of Mission and Foothill Boulevards. It would require about 10 feet additional right-of-way to accomplish this in segments B and C and a similar amount of new right of way acquisition in segments A and D. The sections of Foothill and Mission where parking will be allowed outside of the peak periods will require cars and trucks to park 5 feet away from the curb, a non-standard design that violates the Vehicle Code requirement for vehicles to be parked against the curb. Bicycles would also be subject to the dangers of sudden car door openings in their lane as car passengers attempted to exit their vehicle and cross the bike lane to reach the sidewalk. The bike lanes would also be in the gutter where debris collects. Buses pulling into bus stops would temporarily block the bike lanes. Truckers making deliveries would have to cross the bike lanes, possibly blocking them at times.



*Exhibit 3. Bike Lane/Path Improvement Options for Mission and Foothill*

Option III: Designate both Mission and Foothill Boulevards as Class III bike routes. Signs would be posted on both streets identifying them as a bicycle route. Typically, this is only done where the curb lane is a minimum of 14 feet wide, which could possibly be accomplished by reducing other lane widths. However, this class III bike route option is not desirable because of the high volumes and speeds of vehicular traffic on both of these streets. The California Vehicle Code already allows bicycles to share use of the traffic lanes with automobiles, so nothing is gained by simply designating Foothill and Mission Boulevards as a bicycle route without any other improvements for bicycles. If this option were pursued in this case, bicyclists would have to ride in a different location, i.e., by the curb during peak hours or outside the parking area during non-peak hours.

### **Potential Bicycle Improvements Parallel to Mission and Foothill**

This section identifies the streets parallel to Mission and Foothill Boulevards where various bicycle improvements might be made.

#### Montgomery Avenue Bike Route

As an additional parallel route to Mission Boulevard, a bike route would be ideal along Montgomery Avenue, extending from the county's planned bike route on Grove Way to the Hayward BART station as one of the primary north-south bikeways in the Foothill Boulevard corridor. This route is not in the City's 1997 Bicycle Master Plan but as indicated in Exhibit 24 could be added in future updates.

#### Main Street Bike Route

A bike route on Main Street along this roadway segment is suggested to help extend another parallel corridor bikeway south from the San Lorenzo Creek Trail to the existing bike lane on D Street. The route would travel over the creek on Hazel Avenue and then south on Main Street and connect with the D Street bike lanes although some accommodation may be needed at the new junction of Main Street with D Street. The northern segment has insufficient width for a bike lane until Warren/McKeever Avenue. South of here, a bike lane can exist with a modification of the number of lanes on Main Street. The bike route and lanes could have destination signage and stencil pavement markings. This route is not in the City's 1997 Bicycle Master Plan; however, it is recommended for consideration in future updates, as indicated on Exhibit 24.

#### Watkins Street Bike Route

A bike route along Watkins Street and Fletcher Lane between A Street and Mission Boulevard could connect bicyclists between downtown Hayward and the proposed Hayward Fault bicycle trail. Watkins Street runs parallel to Mission Boulevard yet has slower speeds and lower motor vehicle volumes. This additional parallel route is also recommended for possible inclusion in the City's Bicycle Master Plan.

#### San Lorenzo Creek Trail

While a section of the San Lorenzo Creek Trail is in the City of Hayward and is included in the City's 1997 Bicycle Master Plan, a trail could be extended between Grove Way and City Center Drive. City Center Drive and Maple Court could be used as bike routes to help direct bicyclists and pedestrians to an A Street bike route and to Foothill Boulevard, respectively. The major

adjacent land uses include Mervyn's Headquarters, County offices, and small business retail along Foothill Boulevard.

The San Lorenzo Creek Trail would appeal to more novice bicyclists and to recreational pedestrians and riders. San Lorenzo Creek is channelized and has an access area on its east side for its full length. One concept would be to cover the canal or to use the existing access area, and then to beautify it. If used for pedestrians and cyclists, recommended enhancements would include pedestrian/bicyclist-scaled lighting, paved trail with marked separations for bicyclists and pedestrians, fencing, benches, call boxes, trash/recycling receptacles, destination signage, and landscaping.

The Alameda County Public Works Department is preparing a riparian restoration pilot project for the creek between Hazel Avenue and Second Street, which includes a trail. The County has obtained study funding, and has initial community support from Mervyn's and a homeowners association. The San Lorenzo Creek Trail plans are mentioned in the Alameda County Bicycle Master Plan Update for the Western Unincorporated Area (July 1999).

#### Hayward BART Station Bicycle Parking

There are sufficient bicycle racks at this station; however, on-demand bicycle lockers are recommended for those who want more protection for their bikes. (These lockers allow anyone with a Smart card type key to use a locker when it is not in use.) BART recently installed on-demand bike lockers at the El Cerrito BART station. Such arrangements will need to be coordinated with BART.

#### South Hayward BART Station

Like the Hayward BART station, on-demand bicycle lockers are recommended. Currently, sufficient bike racks exist. Bicycle lockers also exist, yet on-demand versions would be ideal to optimize the use of space.

#### Montgomery Street Terminus

A Montgomery Street bike route would terminate at the Hayward BART station where bicyclists could either park their bikes or take them on the train. This route is not in the City's 1997 Bicycle Master Plan; however, it is recommended for consideration in future updates as mentioned above.

### **Evaluation of Bicycle Improvement Options**

The evaluation of the bicycle improvement options should consider the following:

1. Safety of bicyclists, pedestrians, bus passengers, auto passengers, and auto drivers when they share usage of a single facility.
2. Convenience of direct access to businesses for bicyclists versus parallel routes.
3. Continuity of bicycle routes.
4. Access to businesses fronting Foothill and Mission for pedestrians, bus passengers, and truck deliveries

The consideration of safety should take into account potential conflicts between modes (where one mode must cross the path of another), visibility (the ability of each mode to see the other coming), the speed of travel (which affects the ability of one mode to avoid collisions with the other), and the state vehicle code (which determines the enforceability of any regulations established by the city for the shared use of Foothill and Mission Boulevards by autos, trucks, buses, bicyclists, and pedestrians),

Safety is generally enhanced by street designs that follow standards that the driving, walking, and bicycling public has become accustomed to. Safety usually deteriorates when “surprises” or unexpected situations arise that the traveling public was not expecting.

The ability to travel directly on the street where one’s destination is located is definitely superior to traveling on a parallel facility and then searching for one’s destination. This can be partially overcome with good directional signing, but parallel street travel usually involves some extra out-of-the-way travel distance in order to reach one’s destination.

Continuous bicycle facilities are critical in order to encourage and accommodate bicycle use.

Pedestrian, auto parking, and service vehicle access are critical to the economic well being of businesses fronting Foothill and Mission Boulevards.

### Safety

The parallel road bike routes and lanes follow standard designs that the traveling public is well familiar with.

A bike lane on Mission and Foothill would require some non-standard design features where curbside parking is allowed during the off-peak periods and would pose many moving vehicle, parked vehicle, and bicycle conflicts, especially where bicyclists emerge from behind the parked cars at each intersection.

A bike/pedestrian path along Mission and Foothill will require some design considerations to reduce bicycle speeds where large pedestrian volumes are present and at street crossings. Experienced bicyclists may prefer the higher speeds possible when mixing with auto traffic to the slower speeds that may be required of them when using the path to cross streets, mix with pedestrians and pass in front of downtown businesses.

### Direct Bicycle Access

Providing a bicycle facility directly on Mission and Foothill Boulevards will result in shorter travel distances and faster travel-times for bicyclists traveling north south in the corridor. Parallel routes would require bicyclists to travel a couple of city blocks out-of-the-way to use the parallel route.

Less experienced bicyclists may prefer the slower speeds of auto traffic and the lighter traffic volumes present on the parallel routes, because of the greater perceived safety.

## Continuity

The parallel routes option provides a continuous bicycle lane or route along almost the entire length of the corridor between Industrial Parkway and Grove Way, even though there would not be a bike facility explicitly on Foothill and Mission Boulevards.

A bike lane or bike path on Mission and Foothill Boulevards would also provide the continuity called for in the City Bicycle Master Plan.

## Access to Businesses

The parallel routes options would keep bicycle access to businesses on Foothill and Mission at the same level as for the current situation.

Bike lanes on Mission and Foothill would potentially interfere somewhat with patrons parking their cars on the street and having to cross the bike lane to reach the sidewalk. Truck deliveries to the stores may also have some potential interference from bicycles when crossing the bike lane to access the stores.

A bike path on Mission and Foothill Boulevards would interfere somewhat with patrons accessing the stores from their parked car on the street. There may be similar interference for truck deliveries crossing the path in order to access the stores.

## **Pedestrian Access**

The presence of sidewalks is a key to providing adequate pedestrian access in the corridor. Many parts of the corridor, particularly on Mission Boulevard, presently have stretches without any sidewalks. This project proposes to construct improved sidewalks throughout the corridor. However, where narrower sidewalks are proposed, some easements or right-of-way will be required in order to install bus shelters that meet the Americans with Disabilities Act (ADA) requirements for pedestrian access.

## **Proposed Pedestrian Improvements (General)**

New sidewalk construction must comply with the ADA requirements so as to ensure that disabled access exists. Throughout the Foothill Boulevard/Mission Boulevard corridor, the following improvement should be installed wherever feasible:

- Curb ramps
- Paved sidewalks without obstacles
- Audible pedestrian signals
- ADA accessible pedestrian push buttons
- Crosswalk re-striping of faded crosswalk markings.
- Pedestrian countdown timers
- Pedestrian areas



A section of the San Lorenzo Creek Trail is in the City of Hayward, and is included in the City's 1997 Bicycle Master Plan. Such a trail would be able to serve both bicycles and pedestrians in the corridor.

### **Pedestrian Overcrossing**

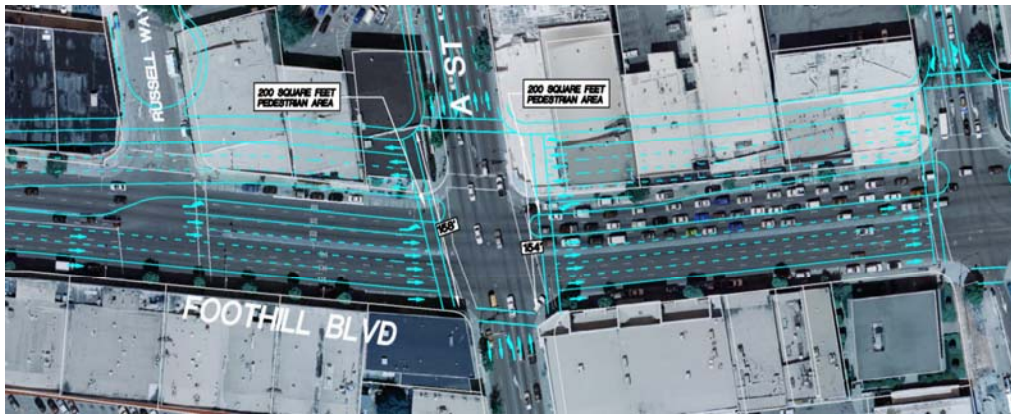
A pedestrian overcrossing might be constructed at one of more heavily traveled pedestrian crossing locations where the street is exceptionally wide, such as Foothill Boulevard at or near "D" Street. Such a crossing would need to be of sufficient height to accommodate truck traffic, since the Foothill-Mission corridor is a truck route. An overcrossing would also need to be constructed in accordance with ADA regulations (with moderately sloping ramps, or with elevators because of space limitations and to have better usage).

### **Pedestrian Areas**

Widening of the roadway, particularly in the downtown area, will present challenges in attempting to preserve adequate and safe pedestrian crossing areas. An example is at Foothill and A Street (see Exhibit 4). When this intersection is widened, it will result in a 158-foot curb-to-curb distance, making it less likely that all pedestrians will cross Foothill Boulevard in one signal cycle. Hence, there will be a need to construct pedestrian areas for possible stragglers within the confines of a 20-foot median. The pedestrian area should include ADA accessible pedestrian push buttons. In addition, this signal location, as well as others where pedestrian crossings might be difficult, should be equipped with pedestrian countdown timers.

Another factor to consider is adequate access by the disabled. The pedestrian treatment discussed above will need to incorporate curb cuts as illustrated in Exhibit 5.

*Exhibit 4. Proposed Pedestrian Crossing Area at Foothill Boulevard and A Street*



*Exhibit 5. Proposed Disabled Access*

